

PATENT COOPERATION TREATY
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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference ACE 0005C	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/AU2005/000173	International filing date (day/month/year) 11 February 2005	Priority date (day/month/year) 16 February 2004	
International Patent Classification (IPC) or national classification and IPC Int. Cl. G06F 3/02 (2006.01)			
Applicant ACEINC PTY LTD et al			

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. (*sent to the applicant and to the International Bureau*) a total of 2 sheets, as follows:

sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input checked="" type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input checked="" type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 1 September 2005	Date of completion of this report 16 January 2006
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer Matthew Hollingworth Telephone No. (02) 6283 2024

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Box No. I Basis of the report

1. With regard to the language, this report is based on:

- The international application in the language in which it was filed
 A translation of the international application into , which is the language of a translation furnished for the purposes of:
 international search (under Rules 12.3(a) and 23.1 (b))
 publication of the international application (under Rule 12.4(a))
 international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- the international application as originally filed/furnished

- the description:

pages 1-14 as originally filed/furnished
 pages* 19 received by this Authority on 24th February 2005 with the letter of 17th February 2005
 pages* received by this Authority on with the letter of

- the claims:

pages 15, 17-18 as originally filed/furnished
 pages* as amended (together with any statement) under Article 19
 pages* 16 received by this Authority on 11th March 2005 with the letter of 9th March 2005
 pages* received by this Authority on with the letter of

- the drawings:

pages 1-8 as originally filed/furnished
 pages* received by this Authority on with the letter of
 pages* received by this Authority on with the letter of

- a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. The amendments have resulted in the cancellation of:

- the description, pages
 the claims, Nos.
 the drawings, sheets/figs
 the sequence listing (*specify*):
 any table(s) related to the sequence listing (*specify*):

4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made; since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages
 the claims, Nos.
 the drawings, sheets/figs
 the sequence listing (*specify*):
 any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. IV Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has, within the applicable time limit:

- restricted the claims
- paid additional fees
- paid additional fees under protest and, where applicable, the protest fee
- paid additional fees under protest but the applicable protest fee was not paid
- neither restricted the claims nor paid additional fees

2. This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:

- complied with.
- not complied with for the following reasons:

The international application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to from a single general inventive concept. In coming to this conclusion the International Searching Authority has found that there are two inventions:

1. Claims 1-8 and 11-21, directed to user interfaces. The detection of counters on a work surface is considered to be a first "special technical feature."
2. Claims 9-10, directed to an RFID counter. The use of two RFID tags separated by a magnetic shield is a second "special technical feature."

Since the abovementioned groups of claims do not share any technical features, a "technical relationship" between the inventions, as defined in PCT rule 13.2 does not exist. Accordingly, the international application does not relate to one invention or to a single inventive concept.

4. Consequently, this report has been established in respect of the following parts of the international application:

- all parts.
- the parts relating to claims Nos.

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 3-5, 8-19, 21	YES
	Claims 1-2, 6-7, 20	NO
Inventive step (IS)	Claims 3, 8, 12-15, 19, 21	YES
	Claims 1-2, 4-7, 9-11, 16-18, 20	NO
Industrial applicability (IA)	Claims 1-21	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

- D1: R. J. K. Jacob et al, *A Tangible Interface for Organizing Information Using a Grid*
- D2: US 2001/0035815 A1 (FLETCHER et al), 1 November 2001
- D3: US 6,167,353 A (PIERNOT et al), 26 December 2000
- D4: US 6,356,255 B1 (WEIL et al), 12 March 2002
- D5: US 5,823,782 A (MARCUS et al), 20 October 1998
- D6: US 5,188,368 A (RYAN), 23 February 1993
- D7: B. Ullmer et al, *The metaDESK: Models and Prototypes for Tangible User Interfaces*
- D8: *DGT Projects website, DGT Electronic Chessboard page*, as archived December 2003
<http://web.archive.org/web/20031207090754/www.dgtprojects.com/eboard.htm>
http://web.archive.org/web/20031206104544/www.dgtprojects.com/eboard_features.htm
- D9: US 2002/0147042 A1 (VUONG et al), 10 October 2002
- D10: JP 2002-320763 A (TOPPAN FORMS CO LTD), 5 November 2002

NOVELTY (N) claims 1-2, 6-7, 20

Claims 1-2, 6-7, 11 and 20: These claims lack novelty when compared with documents D1 and D2. Each of these documents discloses all of the claims' features.

Claims 1-2 and 20: These claims also lack novelty in comparison to any of D3-D8.

INVENTIVE STEP (IS) claims 1-2, 4-7, 11, 16-18, 20

Claims 1-2, 6-7, 11 and 20: As above.

Claims 4-5 and 18: These claims do not involve an inventive step over D1 or D2. The use of a triangular array, rather than a rectangular one as cited, is seen to be a technical equivalent at most.

Claims 16-17: These claims also lack inventive step in light of D1 or D2. RFID tags with programmable memory are well known, and their use as the RFID tags of the cited invention would be obvious.

Claims 9-10: These documents lack inventive step in light of D9 or D10. Each of these documents describes an electronic dice with an RFID tag on each facet. In each case, the facet lying face-down is detected by virtue of its proximity to the tag detector. The addition of a shielding structure to such an arrangement, thereby improving the isolation of the tags, is considered to be at most a workshop improvement on each of the described arrangements.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 5 is unclear, because there is no prior reference to an "array" in any preceding claim.